

Reply To Examiner's Remarks

Claims 1-10 are presented for consideration.

The Examiner rejects claims 1-4 and 6-8 under 35 U.S.C. 103(a) as obvious in view of the disclosures in U.S. Patent No. 5,133,076, issued to Hawkins et al. The Examiner rejects claims 5, 9 and 10 under 35 U.S.C. 103(a) as obvious in view of the combined disclosures in the Hawkins et al patent and U.S. Patent No. 5,539,876, issued to Seito et al.

The Hawkins et al patent discloses a hand held computer with a touch screen and having what appears to be a conventional energy conservation system, as discussed at column 8, lines 42-58. An energy conservation mode is activated by one of four activities or events: (1) pressing a standby key on the face of the computer; (2) opening the bus connector door on the bottom of the computer housing; (3) system time-out (accumulation of a threshold time interval, during which the computer is inactive); or (4) detection of a low battery voltage by an overlay control interface block (78 in Figure 4). The Hawkins et al patent briefly describes, at column 4, lines 20-24 and lines 49-52, use of an electric stylus with the touch screen in a conventional manner, to enter data and/or commands into a hand held computer. The Hawkins et al patent briefly describes, at column 8, lines 42-58, entry of the computer into a standby mode for power conservation purposes, based upon occurrence of at least one of the four events or activities set forth in the preceding.

Method claim 1 of the subject patent application recites a method for operating a hand held computing device. The method comprises the processes of:

providing a hand held computing device with an electrical power conservation system, with an LCD display, with a touch sensitive screen and with a

stylus for use in entering information into the computing device through the touch screen;

sensing whether the stylus is positioned in a stylus receiving receptacle provided on the device; and

when the stylus is positioned within the receptacle, taking at least one of the following set of actions: (i) deactivating the touch screen; (ii) deactivating the LCD display; and (iii) activating the power conservation system.

The Hawkins et al patent does not describe or suggest (i) provision of a stylus receiving receptacle to receive and hold a stylus or (ii) sensing presence or absence of the stylus in the receptacle, as a means of initially determining whether (a) a touch screen should be deactivated, (b) an LCD display should be deactivated and/or (c) a power conservation system should be activated for the computer system. Merely mentioning a stylus, which is used in a conventional manner with a conventional hand held computer for command and/or data entry, does not make obvious (1) providing a stylus receptacle and (2) using presence or absence of the stylus in the stylus receptacle to determine whether a touch screen and/or an LCD display should be deactivated or whether a power conservation system should be activated for the computer.

The Hawkins et al patent is not concerned with use of a stylus, except in a conventional sense of entering commands and/or data into the computer, and is not concerned with any consequences of presence or absence of a stylus in a stylus receptacle. Presence, in a stylus receptacle (not mentioned in the Hawkins et al patent), of a stylus, or absence of the stylus from the receptacle, would have no effect in the computer system disclosed in the Hawkins et al patent. The Hawkins et al patent provides no motivation for providing a stylus receptacle, or for

deactivating a touch screen and/or an LCD display or for activating a power conservation program for the computer, based on presence or absence of a stylus in a stylus receptacle. Thus, claim 1 of the subject patent application is not obvious in view of the disclosures in the Hawkins et al patent.

Claim 2 of the application, dependent upon claim 1, recites that the method further comprises the following process: when the stylus is not positioned within the receptacle, taking at least one of the following actions: (iv) activating the touch screen for entry of information; (v) activating the LCD display; and (vi) deactivating the power conservation system.

As noted above, the Hawkins et al patent is not concerned with any consequences of presence or absence of the stylus in a stylus receptacle, for purposes of activating a touch screen, activating an LCD display and/or deactivating a power conservation system for the computer. The Hawkins et al patent provides no motivation for providing a stylus receptacle, or for activating a touch screen and/or an LCD display or for deactivating a power conservation program for the computer, based on presence or absence of a stylus in a stylus receptacle. Thus, claim 2 of the subject patent application is not obvious in view of the disclosures in the Hawkins et al patent.

Claim 3 of the application, dependent upon claim 1, recites that the method further comprises the following processes:

when the stylus is not positioned within the receptacle:

determining if the system is presently in an active state;

when the system is presently in an active state, taking at least one of the following actions: (iv) activating the touch screen for entry of information; (v) activating the LCD display; and (vi) deactivating the power conservation system;

when the system is not presently in an active state, determining an accumulated time during which the stylus has continuously not been within said receptacle and the device has not been in an active state, and comparing the accumulated time with a selected time-out value;

when the accumulated time is greater than the time-out value, taking at least one of the actions (i), (ii) and (iii) set forth in claim 1;

when the accumulated time is not greater than the time-out value, taking at least one of the actions (iv), (v) and (vi).

The Hawkins et al patent is not concerned with any consequences of presence or absence of the stylus in a stylus receptacle, nor with whether the computer system is, or is not, in an active state, nor with determining an accumulated time during which the stylus has been continuously absent from the receptacle, nor with comparison of this accumulated time with a selected time-out value associated with absence of the stylus from the receptacle. Presence of a stylus in a stylus receptacle, or absence of the stylus from the receptacle for any period of time, would have no effect in the computer system disclosed in the Hawkins et al patent. The Hawkins et al patent provides no motivation for providing a stylus receptacle, or for taking any of the actions (i), (ii), (iii), or (iv), (v), (vi), based upon presence or absence of the stylus from the receptacle. Thus, claim 3 of the subject patent application is not obvious in view of the disclosures in the Hawkins et al patent.

Claim 4 of the application, dependent upon method claim 1, recites that the method further comprises the following processes:

sensing whether the stylus is positioned within the receptacle by a procedure comprising at least one of the following actions:

(a) comparing an impedance measured for the receptacle with an impedance value associated with the receptacle when the stylus is not positioned within said receptacle;

(b) comparing an electrical conductivity measured for the receptacle with an electrical conductivity value associated with the receptacle when the stylus is not positioned within said receptacle;

(c) comparing a capacitance measured for the receptacle with a capacitance value associated with the receptacle when the stylus is not positioned within the receptacle;

(d) comparing a mass measured for the receptacle with a mass value associated with the receptacle when the stylus is not positioned within the receptacle;

(e) determining if an electromechanical switch associated with the receptacle is in a selected switch state when the stylus is not positioned within the receptacle;

(f) determining if an electromagnetic sensor associated with the receptacle senses absence of a selected ferromagnetic component embedded in the stylus when the stylus is not positioned within the receptacle; and

(g) determining if light in a selected wavelength range is received by an optical sensor associated with the receptacle when the stylus is not positioned within the receptacle.

The Hawkins et al patent discloses consideration of four events or activities that lead to adoption of a standby mode: (1) pressing a standby key on the face of the computer; (2) opening the bus connector door on the bottom of the computer housing; (3) system time-out (accumulation of a threshold time interval, during which the computer is inactive); or (4) detection of a low battery voltage by an

overlay control interface block. However, none of these events or activities will explicitly lead to a reaction such as (i) deactivating the touch screen; (ii) deactivating the LCD display; and (iii) activating the power conservation system, if the stylus is determined to be absent from a stylus receptacle. Further, none of the four events or activities considered in the Hawkins et al patent coincides with, or is similar to, any of the seven sensing actions, (a), (b), (c), (d), (e), (f) or (g), that is recited in claim 4 of the subject patent application. Thus, claim 4 of the subject patent application is not obvious in view of the disclosures in the Hawkins et al patent.

Method claims 2-4 are dependent upon method claim 1 and are also believed to be allowable if claim 1 is allowable.

System claim 6 corresponds to method claim 1 and is believed to be allowable for the same reasons that claim 1 is allowable.

System claim 7, dependent upon claim 6, corresponds to method claim 2 and is believed to be allowable for the same reasons that claim 2 is allowable.

System claim 8, dependent upon claim 6, corresponds to method claim 3 and is believed to be allowable for the same reasons that claim 3 is allowable.

System claims 7-8 are dependent upon method claim 6 and are also believed to be allowable if claim 6 is allowable.

The Seito et al patent discloses a computer unit having a “resume processing” mode that is activated and that saves data in the system, in response to removal of certain computer components, such as a display module, a battery or a memory unit. When the “resume processing” mode is activated, data and some system parameters are saved when the removal occurs, and processing can resume when the components necessary for the processing are restored to the computer.

Column 3, lines 9-19, of the Seito et al patent, cited and applied by the Examiner, discloses that a detector, associated with a battery pack for the computer unit, senses whether a battery pack mount latch is off its position or on its position. When the system senses that the battery pack latch is off its position, using a mechanical or optical or electromagnetic switch whose operation is not explained, a power control circuit associated with the battery pack generates an OFF command to the CPU; and the CPU causes the contents of volatile RAM to be stored in non-volatile RAM (column 3, lines 30-44). Disconnect of the battery pack from other parts of the computer unit will clearly interfere with the storage capability of non-volatile RAM, and reaction to this event by storing the volatile RAM contents in non-volatile RAM is a natural reaction. Use of a switch to determine whether this battery pack disconnect has occurred is a reasonable precaution; but this does not suggest or rely upon determining whether a stylus is present in, or absent from, a stylus receptacle.

The combined disclosures of the Hawkins et al patent and the Seito et al patent would teach entry into a power conservation mode if any of the following “five events” occurs: (1) pressing a standby key on the face of the computer; (2) opening the bus connector door on the bottom of the computer housing; (3) system time-out (accumulation of a threshold time interval, during which the computer is inactive); (4) detection of a low battery voltage by an overlay control interface block; and (5) detection that a battery pack latch is in an OFF position.

Claim 5 of the subject patent application, dependent upon claim 1, recites that the method further comprises sensing whether the stylus is positioned within the receptacle by a procedure comprising at least one of the following actions:

(a) comparing an impedance measured for the receptacle with an impedance value associated with the receptacle when the stylus is positioned within said receptacle;

(b) comparing an electrical conductivity measured for the receptacle with an electrical conductivity value associated with the receptacle when said stylus is positioned within the receptacle;

(c) comparing a capacitance measured for the receptacle with a capacitance value associated with said receptacle when the stylus is positioned within the receptacle;

(d) comparing a mass measured for the receptacle with a mass value associated with said receptacle when the stylus is positioned within the receptacle;

(e) determining if an electromechanical switch associated with the receptacle is in a selected switch state when the stylus is positioned within the receptacle;

(f) determining if an electromagnetic sensor associated with the receptacle senses proximity of a selected ferromagnetic component embedded in the stylus when the stylus is positioned within the receptacle; and

(g) determining if light in a selected wavelength range is received by an optical sensor associated with the receptacle when the stylus is positioned within the receptacle.

Presence or absence of a stylus in a stylus receptacle, which is the focus in claim 1 and claim 6 upon which claims 5, 9 and 10 depend, does not interfere with, or facilitate, operation of the computer storage unit or with ability of the computer to reliably store data or commands in volatile RAM, non-volatile RAM, ROM, a hard drive or any other memory device associated with the computer. Thus, disclosure in the Seito et al patent (or in the combined Hawkins et al and Seito et al

patents) of monitoring of a battery pack latch, to determine if the latch is in an OFF position or in an ON position for data/command storage purposes, does not make obvious monitoring of presence or absence of a stylus in a stylus receptacle to determine whether a touch screen and/or LCD display should be deactivated and/or whether a power conservation system should be activated. Further, determining whether a stylus is present in the receptacle, by comparing a presently sensed switch value with a switch value that would be sensed when the stylus is present in the receptacle, as recited in claim 5, is not made obvious by a disclosure of sensing whether or not: (1) a standby key is pressed on the face of the computer; (2) a bus connector door on the bottom of the computer housing is opened; (3) system time-out occurs; (4) a low battery voltage is detected by an overlay control interface block; or (5) a battery pack latch is detected to be in an OFF position; or by reacting to sensing presence of one of these five events by preserving memory contents or entering a power conservation mode. None of these five events involves comparison of a present switch value (impedance, electrical conductivity, capacitance, mass, electromechanical, electromagnetic or wavelength of light received) with a reference switch value associated with presence or absence of a stylus in a stylus receptacle.

Because of these differences, it would not have been obvious, from the combined disclosures of the Hawkins et al patent and the Seito et al patent, to sense whether a stylus is received in, or is absent from, a stylus receptacle, based upon a comparison of a present switch value (one of seven specified measured values) with a reference switch value, as recited in claim 5, in claim 9 and in claim 10. For these reasons, the Applicants believe that claims 5, 9 and 10 are allowable over the combined disclosures of the Hawkins et al patent and the Seito et al patent. Claim

5 is also believed to be allowable if claim 1 is allowable. Claims 9 and 10 are believed to be allowable if claim 6 is allowable. The Applicants request that the Examiner pass the application, including claims 1-10, to issue as a US patent.

Respectfully Submitted,



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Date: 27 January 2003

Patent representative for Applicants